

0608 WINNER OF ASIT-AOT PRIZE: DISORDERED SLEEP PHYSIOLOGY IN CHILDREN PRESENTING FOR PRIMARY CLEFT REPAIR. THE USE OF SLEEP STUDY RESULTS TO GUIDE PREOPERATIVE RESPIRATORY INTERVENTION AND PLAN THE TIMING OF SURGICAL CLEFT REPAIR

Justice Reilly, Craig Russell, Neil Gibson, Tony Moores, Arup Ray, Mark Devlin, David Wynne. *Royal Hospital for Sick Children, Yorkhill, Glasgow, UK*

Aim: Cleft patients are at risk of obstructive sleep apnoea due to altered nasopharyngeal anatomy and upper airway resistance; however there are no current methods to accurately predict pre- and post-operative respiratory distress. This study investigates breathing patterns indicative of the need for respiratory intervention in patients undergoing primary repair.

Method: Prospective analysis of all children presenting for primary surgery in 2010 compared pre- and post-operative sleep studies, pre-operative airway adjunct requirement and post-operative respiratory High Dependency Unit support.

Results: Thirty-nine consecutive patients (25 Female: 14 Male) were studied. Increased de-saturation indexes were most common but not exclusive to patients with Pierre Robin Sequence (PRS) both pre ($p=0.044$) and post ($p=0.043$) repair. PRS was also associated with pre-operative airway adjunct requirement ($p=0.009$) and post-operative respiratory distress ($p=0.002$).

Conclusions: Experience is consistent with recent RCPCH report on disordered sleep physiology, which indicates need for sleep study evaluation of craniofacial patients. Experience also suggests PRS patients should have post-operative studies to guide ongoing therapy as breathing disturbances persist beyond cleft repair. Serial sleep study results can guide timing of cleft repair by indicating safer operative windows and support informed consent by indicating patients likely to require post-operative respiratory support.

0760: CASE SPECIFIC VIRTUAL REALITY SIMULATION IN TEMPORAL BONE SURGERY: A FEASIBILITY STUDY

Chloe Swords¹, Asit Arora¹, Sam Khemani², Arvind Singh², Nasir Bhatti³, Neil Tolley¹. ¹Department of Otolaryngology Head and Neck Surgery, St Mary's Hospital, Imperial College Healthcare National Health Service Trust, London, UK; ²Department of Otolaryngology, Northwick Park Hospital, London, UK; ³Department of Otolaryngology Head and Neck Surgery, John Hopkins Hospital, Baltimore, Maryland, UK

Aim: Virtual reality (VR) temporal bone simulation allows the incorporation of patient specific imaging data to create a three dimensional interactive model. The objective was to evaluate feasibility and pre-clinical applications of case specific surgical rehearsal (CSSR) using a VR temporal bone simulator.

Method: 16 participants (experienced and trainee group) were each allocated a cadaver temporal bone which was CT scanned and uploaded onto the VOXEL-MAN temporal bone simulator. Participants performed a series of standardised temporal bone tasks using the cadaver and VR model. CSSR was assessed using a 5 point Likert scale across 4 domains. Accuracy of VR representation was validated for 6 anatomical landmarks.

Results: Temporal bone upload and VR reconstruction is feasible using a semi-automated system. Participants agreed that the CSSR improves confidence (75%), aid surgical planning (75%) and facilitates training (94%). There was good visualisation of the ossicles and cochlear which facilitates rehearsal of procedures involving the ossicular chain and cochlear implantation. A lack of depth perception and soft tissue reconstruction limit its application.

Conclusion: CSSR using VR temporal bone simulation is feasible and represents a promising application for selected clinical procedures to improve operative outcome. Further clinical evaluation is warranted to assess the potential benefit.

0812: PERICHONDRIITIS OF PINNA ASSOCIATED WITH CHONDRAL PIERCINGS: ARE WE TREATING THEM CORRECTLY?

Zi Wei Liu, Perumal Chokkalingam. *Colchester General hospital, Colchester, UK*

Aim: Pinna perichondritis can arise as rare complications secondary to ear piercing. Less than 30 cases have been reported, associated with an increase in chondral piercings. We systematically examine cases of pinna perichondritis associated with piercing presenting to a district general hospital over ten years, with emphasis on causative organism, antibiotic use and cosmetic outcomes.

Methods: A retrospective review of case notes and microbiology results from patients diagnosed with pinna perichondritis was undertaken. Patients with no history of associated piercings were excluded.

Results: 9 cases of pinna perichondritis associated with piercing was identified from 2001 to 2011. 8 involved chondral piercings. The length of history ranged from 2 to 28 days. Microbiology swabs grew *Pseudomonas aeruginosa* in 8 out of 9 cases. In all 9 cases on admission, the patient had been prescribed an antibiotic that did not have anti-pseudomonal activity. In only 44% of cases was the patient given an anti-pseudomonal antibiotic by on call ENT. On follow up, 77% of patients achieved satisfactory cosmesis.

Conclusion: Pinna perichondritis associated with piercing is commonly caused by *Pseudomonas*. Secondary healthcare providers should ensure antibiotics with anti-pseudomonal activity are given when treating this condition with potentially long term cosmetic implications.

0820: IS THERE A LINK BETWEEN THE CHANGING INCIDENCE OF PERITONSILLAR ABSCESS AND THE RATES OF TONSILLECTOMY IN WALES AND ENGLAND?

Robert Mcleod, Sam Fishpool, David Owens, Steven Backhouse. *University Hospital of Wales, Cardiff, UK*

Objective: ENT UK guidelines state that one episode of peritonsillar abscess is an indication for tonsillectomy. Over the past 10 years there has been increasing pressure to reduce numbers tonsillectomy performed in the UK. This study aims to investigate if there is an association between changing tonsillectomy rates and peritonsillar abscess incidence.

Method: A retrospective study of the diagnosis of peritonsillar abscess and the number of Tonsillectomies performed in Wales and England from April 1999 to March 2009 was undertaken using two national electronic patient episode databases. Data for peritonsillar abscess was identified using ICD Code J36X and Tonsillectomy F341-F349.

Results: 5538(Wales) and 74566(England) episodes of peritonsillar abscess were diagnosed between 1999-2009(0.1847% and 0.1439% respectively). 33416(Wales) and 529324(England) tonsillectomy operations were performed over the same period(1.1142% and 1.0217%). Numbers of tonsillectomies reduced significantly within Wales but there was no change in England. Peritonsillar abscess incidence increased within both England and Wales (increase was greater in Wales).

Conclusion: Peritonsillar abscess is a common condition diagnosed in approximately 0.015% of the population per year. It is unclear if changes in the numbers of tonsillectomy being performed is having a direct impact on peritonsillar abscess presentations.

0838: CALORIC AUDIT: IMPROVING THE MANAGEMENT OF PATIENTS WITH 'DIZZINESS'

Shaun Davey¹, Paul Kirkland². ¹Royal Sussex County Hospital, Brighton, UK; ²Conquest Hospital, Hastings, UK

Aim: Dizziness can be an extremely distressing symptom, accounting for a considerable proportion of ENT referrals. Caloric testing is a measure of vestibular system integrity, and is therefore used as confirmatory evidence of vestibular pathology. The aim of the audit was to determine if patients were referred for this investigation and managed appropriately.

Method: Departmental standards were devised and others adapted from the British Society of Audiology's guidance on vestibular function testing (2010). We included all patients that underwent caloric testing between October 2009 and October 2010.

Results: The mean length from initial clinic appointment to discharge was 28.3 weeks, considerably longer compared to those not tested. Of the tests ordered, only 68% were performed. Post testing 42% of patients had their management altered.

Conclusion: We concluded that a significant proportion of patients were inadvertently subjected to a protracted illness whilst waiting for testing. Adoption of all our recommendations resulted in the following: 1) A reduction in length of illness, brought about by more timely management. 2) An improved Audiology service as these lengthy tests are no longer being performed. 3) No need to purchase costly new equipment, the money saved will be spent improving patient care in other areas.